NATIONAL AGRICULTURAL CHEMICALS ASSOCIATION

NEWS

AND PESTICIDE REVIEW

JULY-AUGUST • 1955 • 1145 19th St., N. W., WASHINGTON, D. C. • VOL. 13, NO. 6

NAC Meeting to Feature Research & Economics

PAGE 5

Highway Expansion—Boon to Pesticides

PAGE 6

Common Names of Insecticides Listed

PAGE 10

F.D.A. Tolerance Extensions

PAGE 12

Improved Clean Grain Program Planned

PAGE 14

27 SEP 1955

NATIONAL AGRICULTURAL CHEMICALS ASSOCIATION

NEWS

AND PESTICIDE REVIEW

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NAC ASSOCIATION AND THE PESTICIDE INDUSTRY

From the date of its foundation in 1933 the National Agricultural Chemicals Association has grown along with the expansion of the Industry. The Industry itself is a relatively young branch of chemical production.

Although pesticides had been used to combat some crop pests since around the turn of the century, the Industry did not have its first real start until just after World War I. Its expansion, particularly since 1933, has been noteworthy.

The record shows that during the past 22 years sales of the Industry's products have increased from $54 million to well over $250 million. Interestingly, during the same period farm output in the United States has risen 50 per cent and, more significantly, farm output per man hour has zoomed more than 100 per cent.

Membership in the Association has followed a similar course. The Association was started with 14 companies as charter members in 1933, to publicize the widening uses of pesticides and to serve the member companies by keeping them informed of the rapidly changing developments in the pesticide field.

The services of the Association, which have steadily expanded over the years, proved their worth and membership has now grown to 137 companies. These member companies now produce more than 85 per cent of the basic chemicals and more than 65 per cent of the formulated pesticides manufactured in the United States.

As is indicated in the survey of the Food and Agriculture Organization of the United Nations, reported on page 3 of the NAC NEWS, pesticides are more needed to combat insects, weeds and other crop-destroying pests throughout the world today than ever before. The potentiality of pest control is virtually unlimited and the NAC Association will continue to grow as the Industry expands.

CONTENTS

July—August 1955

Volume 13, No. 6

Here and There ____ Page 4

Interstate Highway Expansion Program Opens New Opportunities For Pesticides ____ Page 6

News Letter ____ Page 8

NAC Participates in World Health Conference ____ Page 9

Research and Economics Featured At NAC's 22nd Annual Meeting ____ Page 5

Common Names of Insecticides ____ Page 10

Extension of F.D.A. Tolerances Listed ____ Page 12

Government and Industry Move To Improve Grain Sanitation Program ____ Page 14

Library ____ Page 15

The NAC News and Pesticide Review is the official publication of the National Agricultural Chemicals Association, 1145 19th St., N. W., Washington 6, D. C. Telephone: STerling: 3-2833. L. S. Hitchner, Executive Secretary.

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Atomic Energy in Pesticide Research

The Food and Agriculture Organization of the United Nations has just released a report on how atomic energy can be used to increase the world's food supply. Significantly, FAO believes that one of the more important benefits will come from the use of atomic science in research designed to produce more effective pesticides.

Stating that probably the most important problem involving the future welfare of mankind is how to produce more food, the report adds, "The easiest method of increasing (food) supplies is by taking adequate measures to reduce the heavy losses which at present occur in all segments and stages of production, storage and distribution."

"Every year a large part of the potential harvest is destroyed by diseases and pests which attack the growing crop. It has been said that even in such relatively developed countries as the United Kingdom the work of over 51,000 skilled farm workers is lost each year, and that in the United States of America losses caused by insects, weeds and plant diseases account for losses in farm output equivalent to thirteen thousand million dollars ($13 billion) per year.

"Most of these losses could be avoided by the timely application of control measures, and radioisotopes are proving to be exceptional tools in studies which are leading to the development of improved materials and methods for safeguarding our harvests. Adequate control of a destructive insect, for instance, generally requires a thorough knowledge of its life cycle and habits, and tagging insects with radioisotopes provides a much more efficient means of determining their flight range, migrating routes and overwintering habits than methods such as painting which were previously used. These studies will undoubtedly be important factors in better control.

"Extremely effective insecticides have become available in recent years but one of the problems associated with their continued use is that insects frequently build up resistance to these poisons. Studies with insecticides labelled with a radioisotope permit comparison of uptake and metabolism by normal insects and by those that have developed resistance. This work may be a step in determining the nature of resistance to the poisons.

"Similarly, radioactive tags are playing an important part in the development of fungicides, insecticides and weed killers, for use either as direct applications or as systemic poisons."

Miller Law Liaison Committee Formed

The Miller Pesticide Residue Amendment, Public Law 518, approved July 22nd, 1954 is not only a new law but is also a new type of law without specific precedents which can serve as a guide for administration and compliance. For this reason, the National Agricultural Chemicals Association expects that many issues of importance to both Industry and the government will arise, particularly during this initial period of operation. Believing that such issues can be best resolved in the interest of the public by cooperative efforts on the part of the government and the Industry, the Association after discussion with the interested federal agencies has appointed a Miller Law Liaison Committee.

The purpose of the Miller Law Liaison Committee is to serve as a liaison group between the Agricultural Chemical Industry and the two federal agencies directly involved in the administration and enforcement of this law, the Food and Drug Administration and the Department of Agriculture. It is intended that the Committee will meet periodically with representatives of these agencies. At such conferences, it will present for consideration and discussion matters and problems of broad interest to the Industry as they develop. It is anticipated that the government representatives will also present similar matters and problems as they encounter them.

Recognizing its own limitations, the Committee will seek mainly to determine issues for study by other specialized groups rather than to resolve them. For example, if a problem were to arise of the nature and amount of toxicological data necessary to secure a tolerance or an exemption for a pesticide chemical, the Committee would seek to discuss the matter with the government representatives. If it appeared after discussion that a study of the question would be of benefit to both the Industry and the government, it would recommend to the Association that an ad hoc committee of qualified toxicologists be appointed to explore the problem with the proper government agency or agencies. Similarly, if a government agency advised that some particular problem were arising in the administration or enforcement of the law, and it appeared that joint discussion would be helpful, the Committee would recommend that the Association appoint an Industry committee to review the matter with the agency. The reports and recommendations of such committees would be of an advisory nature only, and not binding upon the government or Industry.

The Association believes that the Committee, through cooperation with the federal agencies, can and will make important contributions to the development of proper standards and procedures for the implementation of the Miller Pesticide Residue Amendment and thereby serve the best interests of agriculture, the public, government and Industry.

Research in agricultural chemicals is the key to future improvements in the farmer's ability to fight insects, weeds and plant diseases, so it is reassuring to note that atomic science is being so widely applied in this field.

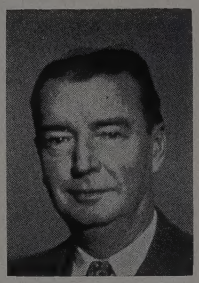
Improvements in pesticides, coming from the research laboratories, will even further increase the ability of pesticides to boost world food supplies and, thereby, contribute toward solving many of the sociological problems which underlie much of the world's unrest.

Here & There

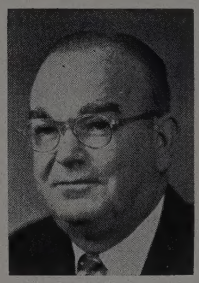
Retiring NAC Board Members

The 22nd Annual Meeting of the National Agricultural Chemicals Association will be marked by the retirement of three members from the Association's Board of Directors. Those retiring are:

Paul Mayfield



R. B. Stoddard



T. L. Wilkerson

Paul Mayfield, General Manager, Naval Stores Department, Hercules Powder Company, Inc., Wilmington, Delaware, who was elected to the Board in 1949 and also served one term as NAC President in 1953-1954; Russell B. Stoddard, now on the staff of the technical director of chemical divisions, Food Machinery & Chemical Corporation, New York, elected to the Board in 1948; and T. L. Wilkerson, General Sales Manager, Agricultural Chemicals Division, American Cyanamid Company, New York, elected to the Board in 1952.

PEOPLE

The promotion of **Russell B. Stoddard** to the staff of Dr. Carl F. Prutton, vice president and technical director of chemicals divisions, Food Machinery and Chemical Corporation, New York, has been announced by Ernest Hart, FMC executive vice president. Stoddard formerly was manager of the company's Fairfield Chemical Division. **Robert H. F. Dade,** southeastern manager of FMC's Niagara Chemical Division, has been named to succeed Stoddard as manager of the Fairfield Chemical Division.

* * *

Charles S. Maddock has recently been named director of the legal department and general counsel for Hercules Powder Company, Wilmington, Delaware. He succeeds **John R. L. Johnson, Jr.** who was elected a vice president of the company. Maddock has been associated with the company since he became assistant general counsel in 1943.

* * *

Phil Alampi, Farm and Garden Director, WRCA and WRCA-TV, celebrated his tenth anniversary on radio and sixth anniversary on television on July 12. The date also marked his first anniversary on WRCA and WRCA-TV.

Earle S. Ebers, formerly director of research and development of the Naugatuck Chemical Division, U. S. Rubber Company, Naugatuck, Connecticut, is the new general sales manager for the division. He replaces **Robert E. Casey,** who has been named marketing coordinator for the division.

* * *

The B. F. Goodrich Chemical Company, Cleveland, Ohio, has named **L. R. Modlin, Jr.** manager of general chemical sales. **J. S. Wolff,** formerly biochemical sales development manager, succeeds Modlin in the post of field sales manager.

FACILITIES

Headquarters of the **Pennsylvania Salt Manufacturing Company** and of its operating divisions have been moved from the Widener Building, Philadelphia, Pennsylvania, to Three Penn Center Plaza in the same city.

* * *

California Spray-Chemical Company, Richmond, California, has announced construction of expanded laboratory facilities in Richmond, California. Completion of the new facilities is slated for late next year.

* * *

The Monsanto Chemical Company, St. Louis, Missouri, has announced that its Organic Chemicals Division will market agricultural chemical formulations under the Monsanto label for the first time in a 15-state mid-western area beginning in 1956. District sales headquarters will be at Minneapolis, Minnesota, Des Moines, Iowa, Kansas City, Missouri, and Indianapolis, Indiana.

* * *

The recently-formed **Diamond Black Leaf Company** has transferred its headquarters staff from Richmond, Virginia to offices in the Union Commerce Building, Cleveland, Ohio.

* * *

Headquarters of the **Grace Chemical Company** are being transferred from New York to Memphis, Tennessee. **William J. Haude,** vice-president in charge of marketing, has been assigned general managership of the company.

One Sixth of U. S. Cropland Sprayed in 1952

Only one-sixth of U. S. cropland was sprayed or dusted to combat weeds, insects, and diseases in 1952, according to a survey by the U. S. Department of Agriculture. Crop losses to these pests, occurring primarily in non-treated acreage, were estimated that year at $7.5 billion.

The USDA survey disclosed that 48 percent of cotton acreage was treated for insects; 75 percent of the potato acreage; 79 percent of tobacco acreage; and only 0.5 percent of field corn acreage. About 12 percent of small grain crops, and 11 percent of field corn were sprayed to control weeds.

In all, approximately 31 million acres of farmland were treated for weed and brush control and 29 million acres were treated for control of insects and diseases. Only 3 million acres were treated both for insects and diseases, and for weeds. The total cost of spraying and dusting to farmers was $256 million, including $144 million paid for materials they used themselves and $112 million paid to custom operators.

Research and Economics Featured At NAC's 22nd Annual Meeting

More Than 500 Expected To Attend Sessions At Spring Lake, N. J.

The program of the 22nd Annual Meeting of the National Agricultural Chemicals Association calls for a wide range of addresses on research, economics and federal legislation of interest to everyone in the agricultural chemicals field.

More than 500 representatives of the pesticide Industry, agriculture and government are slated to hear the Executive Secretary's report and an address by NAC President W. W. Allen, Manager, Agricultural Chemical Sales, The Dow Chemical Company, Midland, Michigan.

Listed on the program for the first day is an address by Warren Moyer, President, Chipman Chemical Company, Bound Brook, N. J., on the "Major Trends in the Pesticide Industry," followed by a report from Dr. H. E. Luedicke, Editor, of The Journal of Commerce, entitled, "A Look Into the Economic Future." Owing to the great interest in safety in the use of pesticides, the day's program will be rounded out with an address by A. W. Mohr, President, California Spray-Chemical Corporation, Richmond, California, on "Safety is Everybody's Business."

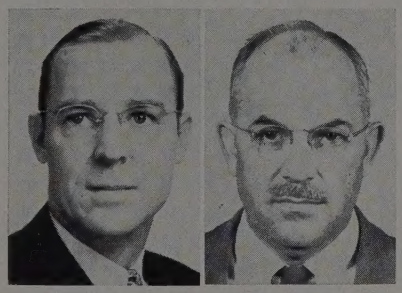
Tolerance Set For Captan

The following tolerance has been set for captan by the Food and Drug Administration:

A tolerance of 20 parts per million is established for residues of captan (N-trichloromethyl mercapto - 4 - cyclohexene - 1,2 - dicarboximide) in or on the raw agricultural commodities apples, apricots, cantaloups, cherries, cucumbers, eggplant, grapefruit, grapes, lemons, limes, mangoes, nectarines, oranges, peaches, pears, peppers, pineapples, plums, prunes, pumpkin, quinces, summer squash, strawberries, tangerines, tomatoes, watermelon, winter squash.

The tolerance became effective upon publication in the Federal Register, July 29, 1955.

The effects of current and future research on the pesticide industry will hold the spotlight on the second day of the meeting when Dr. Jack T. Thurston, Director, Stamford Research Laboratories, of the American Cyanamid Company, Stamford, Connecticut, will report on the trends in industry research. Dr. S. W. Simmons, Chief of Technology Branch, Communicable Disease, U. S. Public Health Service, Atlanta, Georgia,



Dr. Thurston Dr. Simmons

will report on what government research means to the pesticide industry.

As a special feature of the day, Professor G. E. Lehker, Professor of Entomology, Purdue University, Lafayette, Indiana, will present one of his famous illustrated chalk talks on insects under the title, "A New Approach to Agricultural Chemicals Public Relations."

Following an address on NAC services to associate members by James D. Hopkins, President, Hopkins Agricultural Chemical Company, Madison, Wisconsin, on the final day of the meeting, there will be a panel discussion on the latest developments under the Miller Amendment. The panel moderator will be the NAC Executive Secretary, L. S. Hitchner. Panel members on the program include Winton B. Rankin, Assistant to the Commissioner, Food and Drug Administration; Dr. W. G. Reed, Head, Pesticide Regulations Section, Agricultural Research Service, USDA; Dr. Charles W. Palm, Head, Department of Entomology, Cornell University, Ithaca, N. Y., and John Conner, NAC Association counsel.

A reception, banquet, golf tournament, and a tour of the world's largest scientific dairy are scheduled as features of the annual meeting. A special feature for the ladies will be an all-day guided tour of the United Nations in New York City.

Widespread Damage Caused By Host of Corn Insects

Corn insects are causing widespread damage over the nation, the U. S. Department of Agriculture has reported in the weekly "Cooperative Economic Insect Report" issued by USDA's Agricultural Research Service. Earworms, European corn borers, corn leaf aphids and rootworms led the list of the most injurious corn pests named in the report.

Also inflicting damage in varying degrees were the lesser cornstalk borer, the cornstalk borer, the fall armyworm, corn sap beetles, and mites.

Upswing Noted In Chestnut Growing

Chestnut growing, an industry which was virtually wiped out by chestnut blight in recent years, is making a startling comeback through the introduction of blight-resistance varieties and the use of pesticides in effective chestnut weevil control, the USDA reports.

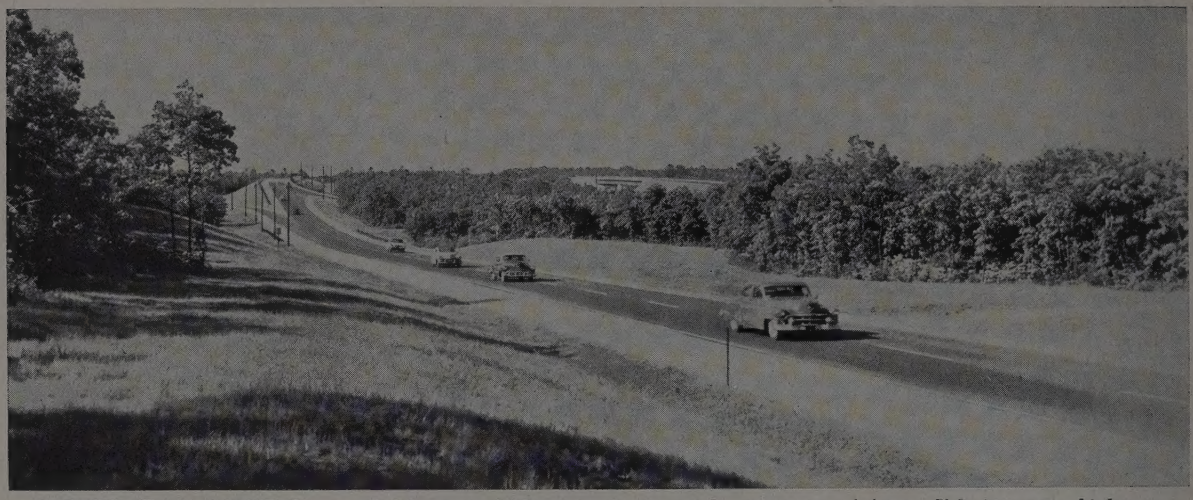
Spraying trees with DDT to kill weevils before they lay eggs, fumigating soil around trees to kill grubs, and fumigating nuts harvested from infested trees are measures recommended by USDA entomologists.

Heptachlor Tolerance Extended

The following extended tolerance for residues of heptachlor (1,4,5,6,7,8,8 - heptachloro - 3a,4,7,7a-tetrahydro - 4,7 - methanoindene) has been established by Food and Drug Administration:

The tolerance of 0.1 part per million for residues of heptachlor is extended to include the following raw agricultural commodities: Alfalfa, clover, sweet clover; beets (including sugar beets); cabbage, brussels sprouts, kohlrabi, cauliflower; corn; cotton; pasture and range grass; onions; peanuts; sugarcane; sweet-potatoes; turnips with tops and rutabagas (yellow turnips) without tops.

A tolerance of 0.1 p.p.m. for residues of heptachlor on potatoes had been established earlier by FDA. The extended tolerance became effective upon publication in the Federal Register, July 29, 1955.



GARDEN STATE PARKWAY, regarded by many highway engineers as the prototype of future U.S. interstate highways. The Parkway extends 165 miles from near Cape May to Paramus, Bergen County, N. J. It features landscaped roadsides and a median strip with an average width of approximately 100 feet.

Interstate Highway Expansion Program Opens New Opportunities For Pesticides

Not since the early 1900's when roadbuilders began to "get America out of the mud" have so many new highways been under construction or in the planning stage.

President Dwight D. Eisenhower has called the present highway system "obsolete". Automobile makers warn that we need new roads which will accommodate 81 million vehicles by 1965—23 million more than are on the roads today. And highway engineers across the country have come up with highway expansion and modernization programs which will cost $100 billion during the next ten years. Federal and state agencies are now spending some $5 billion a year on new roads. If Congress approves President Eisenhower's highway recommendations next year, the entire program will move forward.

This whopping highway program is not primarily designed to increase total highway mileage. Rather, its aim is to construct new kinds of highways with wider rights of way, more built-in safety features, and more ample roadsides, landscaped for both safety and beauty.

New Type of Acreage

Actually, this ten-year proposed highway expansion is creating a new type of acreage in the national economy. This acreage consists of roadside areas, including parks, picnic areas and median strips in dual-lane highways. To maintain this new landscaped acreage economically will require weed and brush control, the use of grass growth inhibitors, and insect control in the roadside wooded areas, picnic grounds and parks.

How many acres will be involved in roadsides during the next ten years? No one knows the exact amount, but an indication that these areas will be extensive is gained by comparing the current situation in one state, Ohio, with some of the projected plans.

Ohio now has about 18,000 miles of state roads and 70,000 miles of secondary roads with an average of slightly less than 4 roadside acres per mile of highway. Ohio's roadside area, however, already totals 330,000 acres, equivalent to 3,300 average size Ohio farms.

Projected Program

Under the projected program, roadside areas will average much more than 4 acres per mile of highway. The 38,000-mile long national inter-state system, for example, is being projected on a 300-foot right of way. This means approximately 36 acres per mile. The four traffic lanes, shoulders, drainageways and two service drives will occupy about 14 acres, leaving approximately 22 roadside acres per mile susceptible to landscaping.

Harold J. Neale, landscape engineer of the Virginia Department of Highways and chairman of the Roadside Construction and Maintenance Committee of the American Road Builders' Association, comments, "By this, you can see that over 60 per cent of the right of way will have to be landscaped."

Mr. Neale adds, "This wide right of way will run through wooded areas, through pastures, through private estates and it is most essential that it be maintained in a manner comparable to adjoining properties. Weed infested turf, if not controlled, will spread to adjoining fields. Mechanical equipment and chemical sprays will help to control this menace, but every effort must be made to keep the cost at a minimum and still maintain a pleasing, parkway atmosphere."

New Concept in Roadbuilding

Highways with wide rights of way and landscaped roadsides are part of a new concept of roadbuilding not merely for the national interstate system but for all of the some 700,000 miles of highways in the federal-aid primary and secondary systems. In the past, most highways have been constructed as utility roads. Roadbuilders were given contracts to clear and level ground and lay a hard-surfaced road. Landscaping and maintenance, if any, was left up to the state and county road engineer.

In contrast, the new highways, whether limited access roads, toll roads or freeways, will have wider rights of way essential for future increase in the number of traffic lanes, for service drives, wider shoulders and drainageways, for turnouts at mail and paper boxes, for wayside parking and recreation facilities, and other features essential to the safety, comfort and convenience of traffic.

Furthermore, contracts for these new "complete" highways would call for the roadbuilder to construct roadside areas at the same time he builds the roadway. Thus, safety hazards such as blind spots in the road and erosion which forms gullies and deepens ditches into traps for motor vehicles can be prevented at the time the road is built. At the same time, the groundwork is laid for creating a parkway atmosphere along highways which will be both pleasing to motorists and also add to values of property adjoining rights of way.

Problems Raised

Understandably, the new emphasis on landscaped roadsides in highway construction is raising new problems for the state and county road engineers who will be charged with maintaining those roadsides. Among those problems are how to select the most effective and efficient means for brush and weed control, how and when to use grass growth inhibitors, and how to use insecticides, particularly in wooded roadside areas.

Actually, herbicides, fungicides, and insecticides are able to make substantial contributions to this new movement to beautify the nation's highways, as a number of highway engineers already are finding out.

A member of the New Jersey Turnpike Authority recently said, "Looking into the future, so far as chemicals are concerned, some of the new weed-killers offer the greatest maintenance labor-savers that have come out of test tubes. They can be used in many places where other weed-control methods are impossible or impractical. . . . Chemical weed killers are becoming an important tool in highway maintenance. In the hands of qualified crews, they do a thorough job with minimum labor costs."

Moving Costs Reduced

L. L. Bateman, county road engineer in Huron County, Michigan, as long ago as 1953 reported to the American Road Builders' Association that he had been mowing the complete roadside area on his primary roads 3 or 4 times per season to cut down the weeds. After spraying chemicals for weed control, he decreased mowing to a double shoulder swath and some spot mowing with a "considerable saving in net costs."

Mr. Bateman added, "However, the most important feature is the luxuriant sod growth fostered by the absence of weeds. Lasting benefits will be less erosion and less annual re-seeding. A beautiful turf is the most valuable roadside asset and will be our greatest reward for annual spraying."

What is true of brush and weed control on county roadsides will be even more applicable to the problems of maintaining the wider roadsides on the superhighways projected under present highway expansion and modernization plans.

Highway enigneers who have used chemicals in roadside maintenance have discovered that along roadsides, brush control helps to keep the highway safe for motorists and to do it economically. Uncontrolled vegetation often creates a safety hazard by obscuring warning signs and traffic signals, and by reducing motorists' visibility at curves, crossroads and driveways.

Weeds and brush allowed to grow too close to the shoulder of the road may break up the pavement, reduce clearance for vehicles (particularly on local roads). Pedestrian hazards also increase as clearance for walking along the road is decreased. Weeds and brush may interfere with proper drainage, clogging drainageways and causing water puddles and ice patches, in winter months, to form on the roadways. Weeds and brush along fences cause a snow problem in winter months.

How Pesticides Can Help

Herbicides, fungicides, insecticides and other pesticide chemicals can help to solve these problems and contribute to the efficiency of roadside maintenance in a number of different ways. Treating grass seed with seed disinfectants has been an aid in spreading the planting season over an additional two months of the year. This helps to level out the seasonal labor peaks, and eliminate fluctuating manpower requirements and associated inefficiencies.

Soil insecticides hold promise of offering control of many of the important soil insects which injure and even destroy the roots of trees, shrubs and turf. Insect pests in roadside park and picnic table areas, too, should receive special consideration. In many parts of the country chiggers are a bothersome nuisance. Also mosquitoes and other flying insects are frequently found in abundance along roadsides. Control of these many annoying, and sometimes

(Continued on Page 9)

An example of roadside spraying with herbicides.

A close-up of coverage obtained by roadside spraying from a truck.

NEWS LETTER

"Clinical Memoranda" Distributed by NACA

"Clinical Memoranda on Economic Poisons," which contains medical analyses of pesticides and antidotes to use in case of accidental poisonings, is now available to physicians in virtually every major community in the country.

The report, compiled at the Savannah Laboratories, U. S. Public Health Service, has been published by the NAC Association, and copies have been distributed to doctors through the American Medical Association, and to all state and local medical societies.

Pesticides Sought to Control Peach Mosaic Disease

The U. S. Department of Agriculture may now be on the way toward economic control of peach mosaic disease which has been a serious threat to the peach industry in areas of eight Western states for more than 20 years.

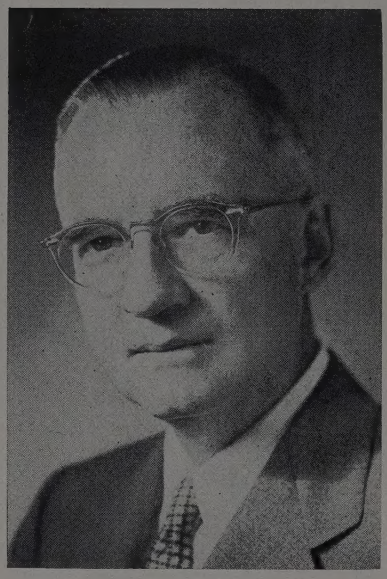
Entomologists Laurence S. Jones and Norton S. Wilson and plant pathologist L. C. Cochran, of USDA's California Agricultural Experiment Station, Riverside, California, have identified a tiny mite as the carrier of the disease.

USDA reports that now chemical sprays and dusts might be found to control the mite, thus eliminating the costly method of removing and destroying diseased trees which is now in use. Some 400,000 trees valued at $10 million have been destroyed in the peach mosaic control program in Arizona, New Mexico, Texas, California, Colorado, Utah, Oklahoma, and Arkansas since 1934, USDA reported.

CACA Mails New Leaflets

Information leaflets on seed treatment, weed control and livestock have been distributed to some 1,000 rural bank managers throughout Canada by the Canadian Agricultural Chemicals Association.

M. F. Anderson, the Association president, stated that the objective of the series is to emphasize the economic importance of Industry products to bankers who play an important part in growers' financial planning.



Marion B. Folsom

Marion B. Folsom, New Secretary, Department of Health, Education and Welfare

Marion B. Folsom, former Under Secretary of the Treasury, who took the oath of office as Secretary of the Department of Health, Education and Welfare on August 1, has had broad experience in the social security field. He succeeded Mrs. Oveta Culp Hobby who recently resigned.

Born at McRae, Georgia, November 23, 1893, Mr. Folsom was graduated from the University of Georgia in 1912 and Harvard Business School in 1914. He immediately joined the Eastman Kodak Company, Rochester, New York, from which he resigned as Treasurer and Director in 1953 to become Under Secretary of the Treasury.

While at Eastman Kodak, Mr. Folsom was a pioneer in developing private company benefit plans for employees. He subsequently served on the President's advisory council which drafted the original Social Security Act in 1934. He also served on the National Advisory Defense Commission from 1940 to 1941, the Social Security Advisory Council to the Senate Finance Committee in 1948, and on the National Advisory Board for Mobilization Policy in 1951 and 1952.

More recently, he worked with the Department of Health, Education and Welfare on plans which resulted in the 1954 Congressional amendments extending the coverage and benefits under the Social Security system. He also was principally responsible for the group life insurance program which went into effect for 2 million federal employees in 1954.

Mr. Folsom served as a captain in the U. S. Army in World War I and served overseas with the 26th Division. The Food and Drug Administration, which is of particular importance to everyone interested in pest control, is a part of Department of Health, Education and Welfare and will be under the overall direction of Mr. Folsom.

Agricultural Aviation Statistics Released

Spraying and dusting accounted for 71 per cent of the agricultural flying during 1954, according to preliminary figures released by the Civil Aeronautics Board.

The total number of hours flown in 1954 was 651,000, a drop of slightly less than 10 per cent from 1953. The National Aviation Trades Association credits this drop to severe drought conditions in 1954.

Of the total hours flown, 259,135 were for spraying; 204,925 for dusting; 62,559 for fertilizing; 52,189 for seeding; 48,491 for defoliation; 7,727 for checking crops; 5,877 for chasing birds; 5,858 for pest control in towns; 2,920 for grasshopper baiting; and 1,591 for tree agitation and checking fallow land.

Aphid Research Set by USDA

An expanded research program to develop better methods for combatting yellow clover aphids in alfalfa will be undertaken by U. S. Department of Agriculture entomologists in 1956. The research will include studies of insecticides, particularly of the systemic type. USDA reports that aphid outbreaks last year caused losses of nearly $5 million to alfalfa growers in New Mexico, Arizona and California.

Highway Program
(Continued from Page 7)

disease-carrying, pests can be gained with the aid of insecticides.

Fungicides are useful along roadsides to control diseases which often take a heavy toll of grasses, shrubs and trees, and herbicides are available to aid in the control of almost any vegetation.

Selective weed killers are of particular interest where broad-leaved weeds are to be removed from grasses. Some of these same selective weed killers are very effective in the removal of brush and undesirable trees. Other weed killers, less selective in nature, can aid in complete eradication of all vegetation, often desirable around guard rails, signs, etc. These herbicides are usually used when the soil is to be kept barren for long periods of time.

Another aid to the highway maintenance departments is now receiving widespread attention. The use of growth regulators, so-called because they actually retard growth of plants, are being employed to slow the rate of growth of grasses, thereby reducing the number of cuttings necessary during the season. These growth regulators are being used primarily in areas that are not readily accessible to power mowing equipment, and in areas where tall, dense growing grass is not desirable.

Specific Answers Sought

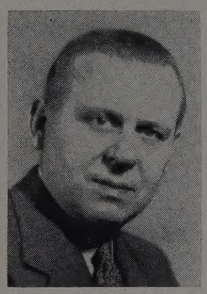
While a number of state and county road engineers have had some experience in using chemicals in roadside maintenance, few have faced the problems of extensive roadside maintenance posed by the nationwide roadbuilding program which is now getting under way. And they are looking to the Industry, to entomologists, and to their own associations for the answers.

A lead in providing the answers is now being taken by the American Road Builders' Association's Roadside Construction and Maintenance Committee, of which the NAC Association and a number of companies in the Industry are members. The aim of the committee is to provide information on roadside construction and maintenance to state and county road engineers to the end that America will have the safest and most beautiful highways in the world.

NAC Participates in World Health Conference: First Ever Held in the United States

by Peter E. Joyce, Member
NAC Foreign Trade Committee

The National Agricultural Chemicals Association was represented in the World Health Conference sponsored by the National Citizens Committee for the World Health Organization May 30 through June 4. Some member companies of the Association also participated in the conference and assisted with financial support and personnel.



Peter E. Joyce

The conference, which was the first of its kind ever held in the United States, followed the meeting of the 8th World Health Assembly in Mexico City in May, and afforded an unusual opportunity for the NAC members present to meet the directors and administrators of health activities of 48 foreign countries.

These countries were: Afghanistan, Australia, Austria, Belgium, Bolivia, Brazil, Ceylon, Cambodia, Canada, Chile, Denmark, Ecuador, Egypt, Formosa, France, Germany, Greece, Iceland, Indonesia, Iran, Israel, Italy, Japan, Jordan, Korea, Lebanon, Libya, Mexico, Monaco, Morocco (Fr.), The Netherlands, Nicaragua, Norway, Peru, The Philippines, Portugal, Spain, Sweden, Syria, Sudan, Thailand, Turkey, Tunisia, United Kingdom, Union of South Africa, Uruguay, Viet Nam and Yugoslavia. Public health officials of the United States also attended.

The conference was divided into three technical sessions held in Washington, D. C., Baltimore, Md., and New York City. The technical sessions, in turn, took the form of a series of seminar discussions and visits to health and medical institutes in the three host cities.

The seminar most important to the NAC Association was held in Washington on new developments in insecticides and their use, particularly in combatting malaria and other insect-borne diseases. The seminar chairman was Dr. Justin M. Andrews, Bureau of State Services, U. S. Public Health Service. He was assisted by Dr. Herbert L. Haller, Agricultural Research Service, U. S. Department of Agriculture; Mr. Winton B. Rankin, Food and Drug Administration; Dr. William E. Durham and Dr. John M. Henderson, both of the Communicable Disease Center, U. S. Public Health Service; and Mr. Donald R. Johnson, Division of International Health, U. S. Public Health Service. A summary of this seminar is being published in the "Public Health Reports", a publication of the U. S. Public Health Service.

Following the seminar, the conferees were received at the White House by President Dwight D. Eisenhower.

Between the seminars much opportunity was afforded the NAC member representatives to discuss with the visitors from overseas their local problems relating to insecticides and it is felt that the conference was most beneficial to all concerned. It is understood that one major objective of the National Citizens Committee for the World Health Organization is to arrange to have the 10th World Health Assembly in 1957 held in the United States. Should this take place, an even greater opportunity should exist to demonstrate its interest in world health programs.

Weeds and Insects Plague Communist Agriculture

Agriculture in Communist countries is suffering from a lack of pesticides and application know-how, according to recent reports from behind the Iron Curtain.

The Soviet newspaper, "Pravda", reported on June 28 that in several districts, "the cornfields are smothered by weeds," and that cultivation and weeding in some cases had been carried out in only 25 percent of the acreage.

Other reports indicate that spraying grapes with copper vitriol to combat vine mildew in Bulgaria, and action to combat Colorado beetles in Poland have been neglected with a resulting waste of labor and materials, leading to lower yields.

COMMON NAMES OF INSECTICIDES

Dr. H. L. Haller, Crops Research, Agricultural Research Service, USDA

The Committee on Insecticide Terminology of the Entomological Society of America has revised and brought up to date the list of names of insecticides for use in the *Journal of Economic Entomology*. The list is confined to the principal organic compounds which have been developed as insecticides in recent years. Approved common names of a few fungicides with which entomologists frequently deal are included at the end of the list. Common names which have been approved by the Inter-departmental Committee on Pest Control are preceded by *.

Name to Be Used	Definition	Other Designations That Have Been Used
*aldrin	not less than 95 percent of 1,2,3,4,10,10-hexachloro-1,4,4a,5,8,8a-hexahydro-1,4-endo-exo-5,8-dimethanonaphthalene	compound 118
*allethrin	*dl*-2-allyl-4-hydroxy-3-methyl-2-cyclopenten-1-one esterified with a mixture of cis and trans *dl*-chrysanthemum monocarboxylic acids	allyl homolog of cinerin I synthetic pyrethrins
Am. Cyanamid 3911	O,O-diethyl S-ethyl mercaptomethyl dithiophosphate	
Am. Cyanamid 4124	O-(2-chloro-4-nitrophenyl)-O,O-dimethyl thiophosphate	
Am. Cyanamid 12008	O,O,-diethyl S-isopropylmercapto-methyl dithiophosphate	
Am. Cyanamid 12009	O,O-diethyl S-*n*-propylmercapto-methyl dithiophosphate	
Am. Cyanamid 12013	O,O-diisopropyl S-isopropyl mercaptomethyl dithiophosphate	
Aramite	product containing 2-(p-tert-butylphenoxy) 2-chloroethylsulfite	compound 88R alkyl aryl sulfite
azobenzene		azobenzide, diphenyl diimide
Bayer 21/199	3-chloro-4-methylumbelliferone-O,O-diethyl thiophosphate	
Bayer 21/200	3-chloro-4-methylumbelliferone-O,O-dimethyl thiophosphate	
Bayer 28/63	[2-(diethoxyphosphinylthio) ethyl] ethylmethyl sulfonium methyl sulfate	
Bayer 16259	a benzotriazine derivative of an ethyl dithiophosphate	
Bayer 17147	a benzotriazine derivative of a methyl dithiophosphate	
Bayer L 13/59	O,O-dimethyl 2,2,2-trichloro-1-hydroxyethylphosphonate	
BHC	1,2,3,4,5,6-hexachlorocyclohexane, consisting of several isomers and containing 12 to 14 percent of the gamma isomer	benzene hexachloride 666 gammexane
Bulan	1,1-bis (*p*-chlorophenyl)-2-nitrobutane	CS-674A
butoxy polypropylene glycol		Crag Fly Repellent
butoxy thiocyanodiethyl ether	2-butoxy-2'-thiocyanodiethyl ether	Lethane 384
Chlorobenzilate	ethyl 4,4'-dichlorobenzilate	Geigy 338, G-23992
*chlordane	1,2,3,4,5,6,7,8,8-octachloro-2,3,3a,4,7,7a-hexahydro-4,7-methanoindene	chlordan, Velsicol 1068 Octa-Klor, Octachlor
Chlorthion	O-(3-chloro-4-nitrophenyl)-O,O-dimethyl thiophosphate	Bayer 22/190
cyclethrin	*dl*-2-(2-cyclopentenyl)-4-hydroxy-3-methyl-2-cyclopenten-1-one esterified with a mixture of cis and trans *dl*-chrysanthemum monocarboxylic acids	
D-D mixture	mixture of 1,2-dichloropropane and 1,3-dichloropropene	D-D, Dowfume N
DDT	commercially available dichloro-diphenyltrichloroethane, the principal constituent of which is 1,1,1-trichloro-2,2-bis(*p*-chlorophenyl) ethane	chlorophenothane (U.S. Pharmacopoeia 14:136.1950)
p,p-DDT	1,1,1-trichloro-2,2-bis(*p*-chlorophenyl) ethane	
DDVP	dimethyl 2,2-dichlorovinyl phosphate	
demeton	mixture of O,O-diethyl-S-ethylmercaptoethyl thiophosphate and O,O-diethyl-O-ethylmercaptoethyl thiophosphate	a trialkyl thiophosphate
Diazinon	O,O-diethyl O-(2-isopropyl-4-methyl-6-pyrimidinyl) thiophosphate	G-24480
dichloroethyl ether	beta,beta'-dichloroethyl ether	1-chloro-2 (beta-chloroethoxy) ethane
dichlorophenyl benzenesulfonate	2,4-dichlorophenyl benzenesulfonate	Genite, Genitol 923
*dieldrin	not less than 85 percent of 1,2,3,4,10,10-hexachloro-6,7-epoxy-1,4,4a,5,6,7,8,8a-octahydro-1,4-endo-exo-5,8-dimethanonaphthalene	compound 497
diisopropyl parathion	O,O-diisopropyl O-*p*-nitrophenyl thiophosphate	compound 3456
Dilan	mixture of 1 part of Prolan and 2 parts of Bulan	CS-708
dimefox	bis(dimethylamino) fluorophosphine oxide	Hanane
dimethyl carbate	dimethyl cis-bicyclo[2.2.1]-5-heptene-2,3-dicarboxylate	
dinitrobutylphenol	4,6-dinitro-*o*-sec-butylphenol	Dinoseb, DNOSBP
dinitrocyclohexylphenol	4,6-dinitro-*o*-cyclohexylphenol	DNOCHP, Dinex
dinitrocresol	4,6-dinitro-*o*-cresol	DNOC, DNC, Sinox
dithiocyanodiethyl ether	beta,beta'-dithiocyanodiethyl ether	Lethane A-70
DMC	4,4'-dichloro-alpha-methylbenzhydrol	di (*p*-chlorophenyl) methylcarbinol
		1, 1-bis (*p*-chlorophenyl) ethanol, Dimite
*endrin	1,2,3,4,10,10-hexachloro-6,7-epoxy-1,4,4a,5,6,7,8,8a-octahydro-1,4-endo-endo-5,8-dimethanonaphthalene	compound 269
EPN	O-ethyl O-*p*-nitrophenyl benzenethiophosphonate	EPN-300
ethyl hexanediol	2-ethyl-1,3-hexanediol	Rutgers 612
furethrin	*dl*-2(2-furfuryl)-4-hydroxy-3-methyl-2-cyclopenten-1-one esterified with a mixture of cis and trans *dl*-chrysanthemum monocarboxylic acids	
*heptachlor	1 (or 3a),4,5,6,7,8,8-heptachloro-3a,4,7,7a-tetrahydro-4,7-methanoindene	Velsicol 104, E-3314
HETP	mixture of ethyl polyphosphates containing 12 to 20 percent of tetraethyl pyrophosphate	hexaethyl tetraphosphate

Holcomb compound 326	O,O-diisopropyl dithiophosphoric acid ester of N,N-diethyldithiocarbamic anhydrosulfide	
Indalone	butyl 3,4-dihydro-2,2-dimethyl-4-oxo-2H-pyran-6-carboxylate	*n*-butyl mesityl, oxide oxalate, butopyronoxyl
isobornyl thiocyanoacetate		terpinyl thiocyanoacetate
*isodrin	1,2,3,4,10,10-hexachloro-1,4,4a,5,8,8a-hexahydro-1,4-endo-endo-5,8-dimethanonaphthalene	Thanite compound 711
Isolan	dimethyl 5-(1-isoproply-3-methylpyrazolyl) carbamate	G-23611
Karathane	2-capryl-4,6-dinitrophenyl crotonate	
lauseto neu	chloromethyl *p*-chlorophenylsulfone	
*lindane	gamma isomer of BHC of not less than 99 percent purity	gamma BHC
*malathion	O,O-dimethyl-S-(1,2-dicarbethoxyethyl) dithiophosphate	malathon, compound 4049
Metacide	product containing methyl parathion and parathion	
*methoxychlor	1,1,1-trichloro-2,2-bis(*p*-methoxyphenyl)-ethane	Marlate, DMDT
methyl demeton	mixture of O,O-dimethyl-S-ethylmercaptoethyl and O,O-dimethyl-O-ethylmercaptoethyl thiophosphates	
methyl parathion	O,O-dimethyl O-*p*-nitrophenyl thiophosphate	methyl homolog of parathion
MGK 264	N-(2-ethylhexyl) bicyclo[2.2.1]-5-heptene-2,3-dicarboximide	Octacide 264, Van Dyk 264
mipafox	bis(isopropylamino) fluorophosphine oxide	
Neotran	product containing bis(*p*-chlorophenoxyl)-methane	di (4-chlorophenoxy) methane
NPD	tetrapropyl dithiopyrophosphate	K-1875
Ovotran	product containing *p*-chlorophenyl *p*-chlorobenzenesulfonate	K-6451
para-oxon	diethyl *p*-nitrophenyl phosphate	oxygen analog of parathion
*parathion	O,O-diethyl O-*p*-nitrophenyl thiophosphate	E-600
Perthane	1,1-dichloro-2,2-bis(*p*-ethylphenyl) ethane	E-605, compound 3422
piperonyl butoxide	product containing as its principal constituent alpha-[2-(2-butoxyethoxy)-ethoxy]-4,5-methylenedioxy-2-propyltoluene	Q-137 (butyl carbitol) (6-propylpiperonyl) ether
piperonyl cyclonene	mixture of 3-alkyl-6-carbethoxy-5(3,4-methylenedioxyphenyl)-2-cyclohexene-1-one and 3-alkyl-5(3,4-methylenedioxphenyl)-2-cyclohexen-1-one	compound 312 piperonyl cyclohexenone
Pirazinon	O,O-diethyl 3-(2-propyl-6-methyl-4-pyrimidinyl) thiophosphate	G-24622
Potasan	4-methylumbelliferone O,O-diethyl thiophosphate	E-838 O,O-diethyl thiophosphoric acid ester of 7-hydroxy-4-methylcoumarin
Prolan	1,1-bis(*p*-chlorophenyl)-2-nitropropane	CS-645A
propylisome	di-*n*-propyl-2-methyl-6,7-methylenedioxy-1,2,3,4-tetrahydronaphthalene-3,4-dicarboxylate	*n*-propyl isome
Pyrazoxon	O,O-diethyl O-5-(3-methylpyrazolyl) phosphate	G-24483
Pyrolan	dimethyl 5-(3-methyl-1-phenylpyrazolyl) carbamate	G-22008
R-242	product containing *p*-chlorophenyl phenyl sulfone and related sulfones	Sulphenone
schradan	octamethylpyrophosphoramide	bis (bis-dimethylamino) phosphonous anhydride, Pestox III OMPA
sesamin	2,6-bis(3,4-methylenedioxyphenyl)-3,7-dioxabicyclo[3.3.0]octane	
sesamolin	2-(3,4-methylenedioxyphenyl)-6-(3,4-methylenedioxyphenoxy)-3,7-dioxabicyclo-[3.3.0]octane	
Shell OS 1836	diethyl 2-chlorovinyl phosphate	
Shell OS 2046	1-carbomethoxy-1-propen-2-yl dimethyl phosphate	
Strobane	a terpene polychlorinate with a chlorine content of approximately 66 percent	compound 3961
sulfotepp	O,O,O,O-tetraethyl dithiopyrophosphate	dithione, Sulfatep
sulfoxide	*n*-octyl sulfoxide of isosafrole	Sulfox-Cide
Systox	product containing demeton	
TDE	commercially available dichloro-diphenyldichloroethane, the principal constituent of which is 1,1-dichloro-2,2-bis(*p*-chlorophenyl) ethane	DDD Rhothane tetracholorodiphenylethane
TEPP	tetraethyl pyrophosphate	TEP
thiocyanoethyl laurate	beta-thiocyanoethyl laurate	Lethane 60
*toxaphene	chlorinated camphene having a chlorine content of 67-69 percent	compound 3956
	Fungicides	
*captan	N-trichloromethyl mercapto-4-cyclohexene-1,2-dicarboximide	Orthocide
chloranil	tetrachloro-*p*-benzoquinone	Spergon
*dichlone	2,3-dichloro-1,4-naphthoquinone	Phygon
*ferbam	ferric dimethyl dithiocarbamate	Fermate, Karbam, black
*glyodin	2-heptadecyl glyoxalidine acetate	Crag Fruit, Fungicide 341
*maneb	manganese ethylene bisdithiocarbamate	Manzate, Manganese EBD
*nabam	disodium ethylene bisdithiocarbamate	Dithane D-14 Parzate, liquid
*thiram	tetramethylthiuram disulfide	Arasan
*zineb	zinc ethylene bisdithiocarbamate	Dithane Z-78, Parzate, dry
*ziram	zinc dimethyl dithiocarbamate	Zerlate, Karbam, white

EXTENSION OF F.D.A. TOLERANCES LISTED

In accord with NAC NEWS policy of keeping readers fully informed of the latest developments under the Miller Amendment, we are reprinting the list of extensions of effective dates for tolerances for various pesticides and their use as announced by the Food and Drug Administration.

The following extensions were listed in the July 20 and July 28, 1955 issues of the Federal Register.

Effective date Sept. 13, 1955:

Aramite (2-(p-tert-butylphenoxy)-isopropyl-2-chloroethyl sulfite.

Effective date October 31, 1955:

Acrylonitrile ..... As a fumigant.

Aldrin ..... Apples, pears, and quinces.
Avocados and papayas.
Berries of the bramble type.
Blueberries.
Cherries.
Citrus fruits (including grapefruit, lemons, oranges, and tangerines).
Cranberries.
Currants.
Dates.
Figs.
Gooseberries.
Grapes.
Guavas.
Peaches, nectarines, apricots, and mangoes.
Pineapples.
Plums and prunes.
Strawberries.
Artichokes.
Asparagus.
Beans (including black-eyed peas and soybeans).
Beets (garden variety), turnips and rutabagas (including tops).
Beets, sugar (including tops).
Broccoli, Brussels sprouts, kohlrabi.
Cabbage and cauliflower.
Carrots, horseradish, parsnips, and radishes (including tops).
Celery.
Collards, kale, mustard greens, spinach, and Swiss chard.
Corn, grain (including sweet, field, and popcorn).
Corn fodder or forage.
Cucumbers and summer spuash.
Eggplant, peppers, and pimentos.
Endive (esarole), lettuce, and salsify.
Melons (including cantaloupes, muskmelons, watermelons), pumpkins, winter squash.
Okra.
Onions (including leeks, shallots, and garlic).
Parsley and watercress.
Peanuts.
Peas and cowpeas (including forage).
Tomatoes.
Grains (including oats, rye, barley, wheat, and rice).
Buckwheat.
Grain forage.
Nuts (including pecans, almonds, hazelnuts, walnuts, hickory nuts).
Legumes for forage (including clovers, alfalfa, soybean hay, peanut hay, and lespedeza).
Grass crops (pasture and range grass, timothy, grass hay).

Aldrin (continued) Mint, spearmint, and peppermint.
Sorghums.
Sorghum forage.

Alkyl dimethyl benzyl ammonium chloride .. Apples.

Allethrin ..... Livestock.

Benzene hexachloride .. Wheat, oats, garlic, blueberries, meat, forage crops (alfalfa and clover).

Butoxy polypropylene glycol ..... In animal fly sprays.

Calcium cyanamide..... Lettuce, celery, beans, tomatoes, potatoes, cabbage and other crucifers, asparagus, hops, small grains, peas, timothy hay, stone fruits.

Calcium cyanide..... As grain fumigant.

Carbon bisulfide ..... As grain fumigant.

Carbon tetrachloride... As grain fumigant.

Captan ..... Citrus fruits (grapefruit, lemons, limes, oranges, tangerines).
Pineapples.
Beans (green beans, lima beans, black-eyed peas).
Peas.
Potatoes.
Apples, pears, quinces.
Grapes.
Strawberries.
Cucumbers, summer squash.
Eggplant, peppers.
Melons (cantaloups, watermelons).
Pumpkins, winter squash.
Tomatoes.
Peaches, nectarines, apricots, mangoes.
Plums, prunes.
Celery.
Collards, spinach.
Lettuce.
Cherries (sweet and sour).

Chlordane ..... Meat, forage crops (including grass), sweetpotatoes, grains, cottonseed, sugarcane.

Chloro IPC..... Preemergence use on spinach.

Chlorobenzilate (ethyl-4,4-dichlorobenzilate ..... Apples, pears.

Chloropicrin ..... As grain fumigant.

Copper carbonate, basic. Pears.

DDT ..... Forage crops (including alfalfa, clovers, peanuts, and other legumes), corn and similar forage, meat, grain, oranges.

Dimite ..... Fruits and vegetables.

Dieldrin ..... Avocados and papayas.
Berries of the bramble type.
Blueberries
Citrus fruits (including grapefruit, lemons, oranges, and tangerines).
Cranberries.
Currants.
Dates.
Figs.
Gooseberries.
Grapes.
Guavas.
Mangoes.

Dieldrin (continued)	Pineapples. Plums and prunes. Strawberries. Artichokes. Asparagus. Beans (including black-eyed peas and soybeans). Beets (garden variety), turnips, and rutabagas (including tops). Beets, sugar (including tops). Broccoli, brussels sprouts, kohlrabi. Cabbage and cauliflower. Carrots, horseradish, parsnips, and radishes (including tops). Celery. Collards, kale, mustard greens, spinach, and Swiss chard. Corn, grain (including sweet, field, and popcorn). Corn fodder or forage. Cucumbers and summer squash. Eggplant, peppers, and pimentos. Endive (escarole), lettuce, salsify. Melons (including cantaloupes, muskmelons, watermelons), pumpkins, and winter squash. Okra. Parsley and watercress. Peanuts. Peas and cowpeas (including forage). Potatoes and sweetpotatoes. Tomatoes. Grains (including oats, rye, barley, wheat, rice). Buckwheat. Grain forage. Nuts (including pecans, almonds, hazelnuts, walnuts, hickory nuts). Legumes for forage (including clovers, alfalfa, soybean hay, peanut hay, lespedeza). Grass crops (pasture and range grass, timothy, grass hay). Mint, spearmint, and peppermint. Sorghum. Sorghum forage.
Endrin	Cabbage, sugar beets.
EPN (O-ethyl-O-paranitrophenyl benzene thiophosphonate)	Grapes, nuts (including pecans, walnuts, and almonds), tomatoes, olives, onions, cottonseed, sugar beets.
Ethylene dibromide	As grain and soil fumigant.
Ethylene dichloride	As grain fumigant. Citrus, strawberries.
Ethylene oxide	Spices.
Ferbam	Almonds.
Heptachlor	Alfalfa, clover, and sweet clover. Beets, including sugar beets. Cabbage, brussels sprouts, kohlrabi, and cauliflower. Corn. Cotton. Pasture and range grass. Onions. Peanuts. Peas. Sugarcane. Sweetpotatoes. Turnips.
Hydrocyanic acid	As a fumigant for grains, dried peas and beans, and nut meats.
Karathane (2,6-dinitro-6-caprylphenyl crotonate)	Apples, pears, almonds, cantaloup, cucumbers, squash.
Karmex DW (3-(3, 4-dichlorophenyl)-1,1-dimethyl urea)	Cottonseed.
Karmex W (3-(para-chlorophenyl)-1, 1-dimethyl urea)	Pineapple, asparagus, onions, sugarcane.
Lindane	Cranberries, cantaloupe, watermelons, grain (from treating storage bins), meat, walnuts, forage crops (alfalfa, clover), sweetpotatoes and yams.
Malathion	Alfalfa, apples, apricots, avocados, barley, beans, beets, blueberries, broccoli, brussels sprouts, cabbage, cauliflower, celery, cherries, citrus, clover, cranberries, cucumbers, dates, dandelions, kohlrabi, sweet corn, currants, gooseberries, raspberries, dewberries, eggplant, grapes, guavas, kale, lettuce, mangoes, melons, mustard, oats, onions, passion fruit, pasture grass, peaches, pears, pecans, peas, peppers, pineapples, plums, potatoes, prunes, rutabagas, spinach, squash, strawberries, tomatoes, turnips, walnuts, wheat.
Maleic hydrazide	Potatoes, onions.
Maneb	Almonds, beans, carrots, celery, cranberries, cucumbers, figs, grapes, onions, peaches, potatoes, spinach, tomatoes.
Methoxychlor	Carrots, currants, gooseberries, pasture grasses, forage legumes (alfalfa, clovers, peanuts, cowpeas, soybeans), peanuts, mint, meat, grains.
Methyl bromide	As a fumigant.
Ovotran (para-chlorophenyl parachlorobenzene sulfonate)	Apples, peaches. Citrus, melons, pears, plums, prunes.
Parathion	Forage crops (alfalfa, clover, peas, pangola grass, timothy, vetch), field crops (barley, corn, oats, wheat), hops, olives.
Phygon (2,3-dichloro-1,4-naptho-quinone)	Celery, tomatoes.
Piperonyl butoxide	Grains (from storage treatment). Apples, citrus, livestock, pears, tomatoes.
Potassium cyanate	As weed-killer spray, resulting in residues on asparagus, onions, peas, tomatoes, cottonseed, soybeans, field beans.
Pyrethrins	Apples, citrus, grains (stored livestock, pears, tomatoes.
Sodium dimethyl-dithiocarbamate	Cantaloups.
Sodium orthophenyl-phenate tetrahydrate	Apples, pears.
Sulfoxide (n-octyl-sulfoxide of isosafrole)	In fly sprays.
Sulphenone (para-chlorophenyl phenyl sulfone)	Apples, pears, peaches.
Systox (b-ethyl merceptoethyl diethyl-thionophosphate)	Apples. Pears. Oranges. Lemons. Grapefruit.

(Continued on Page 15)

Government and Industry Move To Improve Grain Sanitation Program

New Methods Proposed To Inform Farmers On Need for Clean Grain

Nearly 100 representatives of industry, agriculture and the government agreed at a meeting in Washington, D. C. on July 8 that new means are needed to expand the U. S. Department of Agriculture's educational program on clean grain.

The meeting was called by the Federal Extension Service in cooperation with the Food and Drug Administration to improve teamwork in the clean grain effort, make everyone more familiar with existing clean grain education programs, and suggest new ways to strengthen these programs.

At stake in the program are millions of dollars worth of stored grains destroyed or contaminated every year by insects and rodents. The USDA estimates that the losses now amount to about $200 million a year caused by insects and $50 million a year caused by rodents.

Clean Grain Important

Moreover, current programs of the government to store large quantities of grain for long periods of time have made the chance of loss due to contamination more acute.

Fortunately, the means to protect stored grain against pests including insecticide sprays, rodenticides and grain fumigants, are available. The real job expressed by Wayne Colberg, North Dakota Extension Entomologist, is to sell farmers on the importance of clean grain. "Farmers must be sold on the importance of clean grain before they'll buy the products to protect it."

Much already has been done in this direction. An aggressive educational campaign, spearheaded by the Federal Extension Service, and supported by industry groups such as the millers, bakers, railroads, and pesticide manufacturers has been underway since 1950.

FDA Action

In January of this year FDA launched a new wheat inspection program with a view toward eliminating contaminated crops, and the Commodity Stabilization Service in April announced that 1954-crop wheat under loan, to be eligible for reseal for another year and that 1955-crop wheat to be eligible for price support or for delivery under price support purchase agreements, must meet minimum FDA clean grain requirements.

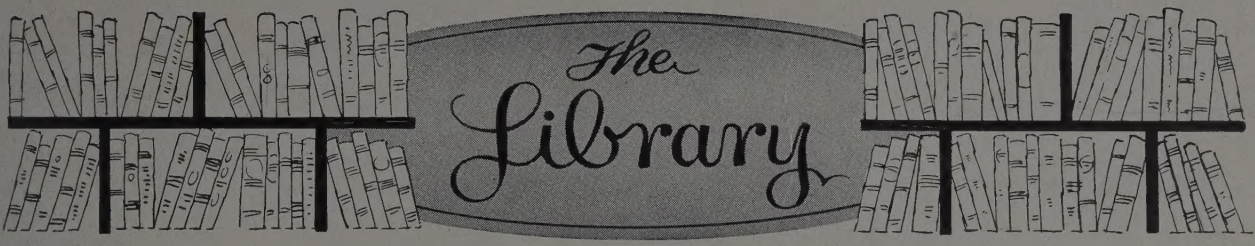
Clyde Noyes, of the Agricultural Extension Service, Nebraska, who has been coordinating USDA's clean grain program, reports, however, that much remains to be done, particularly in educating farmers on the importance of insect and rodent control.

Expansion Suggested

Means suggested at the meeting to strengthen the educational program include making more posters, slides, radio platters and television films on clean grain, broadening and stepping up the activities of state clean grain committees, holding regional clean grain meetings, providing unit instruction material on clean grain for Vocational Agricultural teachers, publishing in each state a bulletin including all information on clean grain from seeding to harvest, and adding personnel to the USDA and to state and county services to promote the program.

All those at the meeting, including the NAC Association and a number of interested Industry members, pledged their active support to furthering the clean grain program. USDA reports that some action already is being taken on all of the above suggestions.

CLEAN GRAIN MEETING PANEL (Left to Right)—Clyde Noyes, Agricultural Extension Service, Nebraska; George Larrick, Commissioner, Food and Drug Administration; Lloyd Case, Associate Director, Grain Division, Commodity Stabilization Service; C. M. Ferguson, Administrator, Federal Extension Service, Panel Chairman; Herman Fakler, Vice President, Miller's National Federation; William C. Dachtler, Agricultural Marketing Service, USDA; Dorr Green, Chief, Division Predator and Rodent Control, U. S. Fish and Wildlife Service; Wayne Colberg, Entomologist, North Dakota; and John T. McCarthy, President, Jersey Bread Company, Toledo, Ohio, representing the bakers.



PUBLICATIONS

Two Ears of Corn, Two Blades of Grass. D. H. Killeffer. It has been popular for writers to raise a cry of alarm at the dire effects of growing population on available supplies of foods and other necessary consumer goods. Mr. Killeffer in this book takes an optimistic view, pointing out the contributions chemicals are making toward improving health, increasing our food supply, and creating an abundant and peaceful future. 133 pages. 30 illustrations. $4.00. D. Van Nostrand Company, New York, N. Y.

Analysis of Insecticides and Acaricides. Francis A. Gunther, associate insect toxicologist, and Roger C. Blinn, principal laboratory technician, University of California, Citrus Experiment Station, Riverside, California. Presents information on how to sample, identify and determine insecticides and their residues. Includes analytic procedures for determining approximately 90 insecticides and acaracides. 708 pages, 72 illus., 50 tables. $14.00. Interscience Publishers, 250 Fifth Avenue, New York 1, N. Y.

Insects and Diseases of Vegetables in the Home Gardens. U. S. Department of Agriculture. Includes information on insecticides and fungicides farmers, market gardeners and home gardeners can use to control vegetable insects and diseases. 60 pages. Four color plates and 45 black-white drawings of insects. Home and Garden Bulletin No. 46. 25 cents. Superintendent of Documents, U. S. Government Printing Office, Washington 25, D. C.

Extent and Cost of Spraying and Dusting on Farms —1952. Statistical Bulletin No. 156. U. S. Department of Agriculture. 25 pages including 14 pages of detailed statistics covering every state and every major crop in the United States. 20 cents. Superintendent of Documents, U. S. Government Printing Office, Washington 25, D. C.

MEETINGS

American Chemical Society. 128th National Meeting. September 11 to 16. University of Minnesota, Minneapolis, Minnesota.

Western Agricultural Chemicals Association. Annual Meeting. October 11. Hotel Claremont, Berkeley, California.

Entomological Society of America. Annual Meeting. November 28 to December 1. Netherlands Plaza, Cincinnati, Ohio.

Chemical Specialties Manufacturers Association. 42nd Annual Convention. December 5, 6 and 7. Roosevelt Hotel, New York City.

North Central Weed Control Conference. 12th Annual Meeting. December 6, 7 and 8. Hotel Fontenelle. Omaha, Nebraska.

Beltwide Cotton Production Conference. Initial Conference. December 15 and 16. Peabody Hotel. Memphis, Tennessee.

F.D.A. Tolerances *(Continued from Page 13)*

Systox (continued)	Grapes.
	Strawberries.
	Broccoli.
	Brussels sprouts.
	Cabbage.
	Cauliflower.
	Muskmelons.
	Potatoes.
	Almonds.
	English walnuts.
	Alfalfa.
	Clover.
	Hops.
TDE	Meat.
Toxaphene	Cranberries, plums and prunes, beets, turnips, rutabagas, sugar beets, horseradish, parsnips, collards, kale, mustard greens, spinach, Swiss chard, peppers, pimentos, cow peas, grains (including oats, rye, barley, wheat, rice, sorghum grain), buckwheat, nuts (including pecans, walnuts, hazelnuts, hickory nuts), legumes for forage (including clovers, alfalfa, soybean hay, peanut hay, lespedeza, cow pea hay), grass crops (pasture and range grass, timothy, grass hay), grain forage (including corn and sorghum), sugarcane, meat.
Trichloroethane	As grain fumigant.
	Citrus, strawberries.
Zineb	Pecans, hops, mushrooms.
Ziram	Almonds, pecans, strawberries.

Effective date January 22, 1956:

Diphenyl	On citrus.

The extensions prescribed in paragraph (a) of this section apply only to the extent that tolerances or exemptions under section 408 of the Federal Food, Drug, and Cosmetic Act shall not have been established prior to the effective dates as extended.

Extension is not granted for the following indicated uses of the listed pesticide chemicals. Conditions do not exist that necessitate extension for these uses.

Hexamethylenetetramine	On citrus.
Methoxychlor	In milk.
Rotenone	Unspecified uses.
Sodium O-phenylphenate	On citrus.

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